

**DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHOD OF MODIFYING PLANT PHENOTYPES WITH NONSYMBIOTIC  
HEMOGLOBIN

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(Attorney Docket No. 049280-0102)

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the specification of which (check one)

       is attached hereto.

  X   was filed on 12/10/2004 as United States Application Number or  
PCT International Application Number 10/582,321  
(PCT/IB2004/004419) and was amended on June 9, 2006  
(if applicable).

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I believe that the above-identified specification contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention, and sets forth the best mode contemplated by me of carrying out the invention; and

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code §119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

U.S. Provisional Application Number	Filing Date
60/528,777	12/12/2003

I HEREBY CLAIM the benefit under Title 35, United States Code, §120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Application Number	Parent Filing Date	Parent Patent Number

I HEREBY APPOINT the registered attorneys and agents at Customer Number

**22428**

to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith.

I request that all correspondence be directed to:

Courtenay C. Brinckerhoff  
FOLEY & LARDNER LLP  
Customer Number: 22428

Telephone: (202) 295-4094  
Facsimile: (202) 672-5399

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

I FURTHER DECLARE THAT all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Name of first inventor	Robert D. Hill
Residence	Winnipeg, Manitoba
Citizenship	Canadian
Post Office Address	34 McNulty Cres. Winnipeg Manitoba R2M 5H4 Canada
Inventor's signature	<i>R. D. Hill</i>
Date	<i>April 23, 2007</i>
Name of second inventor	Kevin Baron
Residence	Carberry, Manitoba
Citizenship	Canadian
Post Office Address	Box 623 Carberry Manitoba R0K 0H0 Canada
Inventor's signature	<i>K. Baron</i>
Date	<i>April 23, 2007</i>

FORM PTO-1595 (modified)

U.S. DEPARTMENT OF COMMERCE

(Rev 6-93)

Patent and Trademark Office

# RECORDATION FORM COVER SHEET PATENTS ONLY

To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copies thereof.

1. Name of conveying party(ies):

**Robert D. Hill**  
**Kevin Baron**

2. Name and address of receiving party(ies):

**University of Manitoba**  
**202 Administration Building**  
**Winnipeg, Manitoba R3T 2N2**  
**Canada**

Additional conveying party(ies) **NO**

3. Nature of conveyance:

**ASSIGNMENT**

Execution Date:

**December 1, 2004**Additional name(s) & address(es) attached? **NO**

4. Application number(s) or patent number(s):

If this is being filed together with a new application, the execution date of the application is:

A. Patent Application Number(s):

**10/582,321**

B. Patent Number(s):

Additional numbers attached? **NO**

5. Name and address of party to whom correspondence concerning document should be mailed:

**Courtenay C. Brinckerhoff**  
**FOLEY & LARDNER LLP**  
**Washington Harbour**  
**3000 K Street NW, Suite 500**  
**Washington, D.C. 20007-5143**

05/23/2007 JBALINAN 00000145 10582321

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6. Total number of applications/patents involved: **1**7. Total fee (37 C.F.R. § 3.41): **\$40.00**

Check Enclosed

☒ Authorized to be charged to credit card

Authorized to be charged to deposit account

8. Payment Information

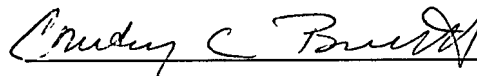
a. Credit Card Last 4 Numbers **1682**  
Expiration Date **11/30/2008**

b. Deposit account number **19-0741**  
Authorized User Name

**DO NOT USE THIS SPACE**

9. Statement and signature:

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. The Commissioner is hereby authorized to charge any additional recordation fees which may be required in this matter to the above-identified deposit account.*

**Courtenay C. Brinckerhoff****May 22, 2004**

Name of person signing

Signature

Date

Total number of pages including cover sheet, attachments, and document: **8**

ASSIGNMENT AGREEMENT

THIS AGREEMENT made as of this *1st* day of *Dec*, 2004, A.D.

BETWEEN:

THE UNIVERSITY OF MANITOBA  
(hereinafter referred to as the "University")

- and -

ROBERT D. HILL  
&  
KEVIN BARON  
(hereinafter collectively referred to as the "Inventors")

WHEREAS:

- A. Robert D. Hill is an academic staff member of the University and is covered by the Collective Agreement between the University and the University of Manitoba Faculty Association (hereinafter referred to as "UMFA").

AND

Kevin Baron is a graduate student of the University at its Fort Garry Campus.

- B. The Inventors have developed and invented "*Regulating Plant Phenotype Through Nonsymbiotic Hemoglobin*" for which the University have made a provisional patent application in the United States.
- C. The Inventors made the invention as an academic staff member and as a graduate student of the University, in the course of research involving use of the University's premises, equipment and resources and encroachment on the University's time.
- D. The Patent and Copyright By-law, Article 26.00 of the Board of Governors of the University (hereinafter referred to as the "By-law"), sets out the rights and interests of the University and its staff members respecting patented and unpatented inventions and improvements.

**THIS AGREEMENT WITNESSES AS FOLLOWS:**

**ARTICLE 1 - DEFINITIONS**

- 1.1 "Technology" means the combination of:
- (a) the Invention and inventions, improvements and claims under patents;
  - (b) Copyright;
  - (c) Know-how;
  - (d) Patents.
- 1.2 "Invention" means "*Regulating Plant Phenotype Through Nonsymbiotic Hemoglobin*" as defined in United States Provisional Patent Application, Serial # 60/528,777 , filed December 12, 2003.
- 1.3 "Copyright" includes copyright in maps, charts, negatives, plans, tables and compilations, records, audiotapes, computer software (including object and source codes) programs and the expression of ideas inherent in the items listed in 1.1.
- 1.4 "Know-how" includes all technical information, procedures, processes, trade secrets, methods, practices, techniques, information, bills of parts, diagrams, drawings, specifications, blueprints, scientific theorems, lists of materials, models, samples, manuals and data relating to the design, manufacture, production, inspection and testing of the Invention.
- 1.5 "Patents" includes patent applications that have been filed to date, relating to the Technology and patent applications hereafter to be filed by the University relating to the Technology, and any and all patents which may hereafter be granted pursuant to said patent applications (including all divisions, continuations, reissues and extensions thereof and all related international priority rights), whether foreign or domestic.
- 1.6 "Net Income" means lump sum, installment payments and royalty income received by the University less direct costs incurred by the University in patenting, licensing, protecting, defending and/or exploiting the Technology.

**ARTICLE 2 - ASSIGNMENT**

- 2.1 The Inventors hereby assign to the University the entire and exclusive right, title and interest in and to the Technology.
- 2.2 The Inventors hereby request that all Patents which may be granted or issued for the Technology are issued to the University as the assignee, for the sole use of the University to the full end of the term for which said Patents may be granted, as fully and entirely as the same would have been held by them had this assignment not been made.
- 2.3 The Inventors waive *all rights they may otherwise have pursuant to the By-law* subject to 3.3.
- 2.4 THE INVENTORS FURTHER WAIVE ANY MORAL RIGHTS THEY HAVE IN CONNECTION WITH THE TECHNOLOGY.
- 2.5 The Inventors shall promptly, upon request and without compensation:
  - (a) do all lawful acts including:
    - i. the execution of all necessary documents, and
    - ii. the giving of testimony that *in the opinion of the University may be necessary* for:
      - (1) obtaining, sustaining or re-issuing patents relating to the assignment of rights hereunder, and
      - (2) perfecting, affirming, recording and maintaining the title of the University to the Technology, and
  - (b) generally cooperate to the fullest extent in all matters pertaining to the Technology and the University's title thereto, and



- (c) subject to the terms of any sale, assignment or license agreement relating to the Technology, withhold publication of results of research relating to the Technology:
  - i. pending filing patent applications, or
  - ii. in order for the University to carry out any licensing or sale or assignment arrangements by the University respecting the Technology.

Further to 2.5, the University shall pay all pre-approved out-of-pocket expenses, including without limitation, travel and accommodation incurred by the Inventors in complying with the provisions of subparagraphs (a) and (b) above.

### ARTICLE 3 - UNIVERSITY OBLIGATIONS

- 3.1 The University shall have the exclusive responsibility for causing patent applications to be filed relating to the Technology which, in its sole discretion deems advisable.
- 3.2 Prior to the University entering into any sale, assignment, or license relating to the Technology, the University shall make reasonable efforts to notify the Inventors and shall obtain their written approval of the general terms thereof, which approval shall not be unreasonably withheld. Notwithstanding the foregoing, if the University receives no response from any of the Inventors within thirty (30) days from the date it sent the aforesaid notice, the University may enter into such sale, assignment or license.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

#### ARTICLE 4 - REPRESENTATIONS

- 4.1 The Inventors represent that they are the first co- inventors of the Technology.
- 4.2 The Inventors represent that they have not wilfully infringed upon any patent, copyright or trade secret of a third party in the course of developing the Technology.
- 4.3 The Inventors agree that they shall promptly notify the University's Vice-President (Administration), or their designate, if they acquire knowledge of any infringement claim *which might be reasonably made with respect to the Technology.*

#### ARTICLE 5 - NOTICE

- 5.1 Any notice, report or other communication which any party may desire to give to the other, may be hand delivered or sent by prepaid courier or registered mail, or by facsimile transmission to the respective addresses as set out below, or to such other address as one party hereto might subsequently advise the other:

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

If to the University:

The University of Manitoba  
University Industry Liaison Office  
Room 631 Drake Centre  
181 Freedman Crescent  
Winnipeg, Manitoba R3T 5V4

with a copy to:

The University of Manitoba  
202 Administration Building  
Winnipeg, Manitoba R3T 2N2  
Attention: Vice-President (Administration)

#### ARTICLE 6 - MISCELLANEOUS

6.1 Nothing in this Agreement shall be construed as releasing the Inventors from responsibility and liability arising from any act or omission of the Inventors with respect to the Technology.

6.2 This Agreement may be amended by the parties as they may from time to time mutually agree in writing.

[REDACTED]

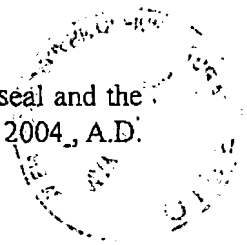
6.4 Preamble paragraphs A. through D. form a part of this Agreement.

6.5 This Agreement contains the entire agreement between the University and the Inventors and supersedes all prior agreements, negotiations, representations and proposals, written and oral.

6.6 This Agreement shall be interpreted and governed by the laws of Canada and the Province of Manitoba as applied to transactions taking place entirely within Manitoba between Manitoba residents. Any action taken relating to this Agreement shall be commenced in the Court of Queen's Bench (Winnipeg Centre) of Manitoba.

6.7 The Inventors hereby acknowledge that they have been advised of their right to seek independent legal counsel.

IN WITNESS WHEREOF the Inventors have hereunto set their hand and seal and the University has hereunto set its Representative Signature this 1st day of Dec, 2004, A.D.



Robert D. Hill

Al Zambodien  
Witness

R. D. Hill

Kevin Baron

Al Zambodien  
Witness

Kevin Baron

THE UNIVERSITY OF MANITOBA  
by its authorized representative

Al Zambodien  
Witness

Per: Alan Simms  
Alan Simms  
for  
Vice-President (Administration)